



Application No. 08/994,642  
Attorney Docket No. 35.C12444

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

3. (Twice Amended) An image pickup device comprising:  
a color filter array comprising [the] color filters  
arranged in [the] horizontal and vertical directions;  
[plural] a plurality of pixels including photoelectric  
converting elements arranged in the horizontal and vertical  
directions, respectively corresponding to [said] the color  
filters;  
a plurality of vertical read-out units provided for  
[every] a plurality of pixels arranged in the vertical direction,  
[for reading] said plurality of vertical read-out units arranged  
to read out signals from [said] the plurality of pixels arranged  
in the vertical direction;  
a horizontal read-out unit [for reading] arranged to  
read out sequentially the signals from said plurality of vertical  
read-out units in the horizontal direction;  
an output unit [for outputting] arranged to output  
sequentially the signals from said horizontal read-out unit; and  
a control [means for dividing] unit arranged to divide  
[said plural] the plurality of pixels on [the] a unit basis of a

predetermined number of lines, which [include] includes a plurality of first lines and a plurality of second lines, and [thinning out the signals of the pixels of said plurality of second lines or adding] to add the signals of [the] pixels of [said] the plurality of first lines and the signals of [the] pixels of [said] the plurality of second lines, [thereby controlling the] in order to control pixels of [said] the predetermined number of lines so as to generate one kind of color difference signal.

5. (Amended) An image pickup device according to claim 3, wherein [the] signal charges of two predetermined pixels [which] that are mutually adjacent in the vertical direction, among the plurality of pixels arranged [respectively] corresponding to [said] the color [filter] filters, are added and an image signal corresponding to [said] the added signal charges is outputted from said output unit.

7. (Amended) An image pickup device according to claim 5, wherein [said] the added signal charges of the two pixels are further added with [the] signal charges of two predetermined

pixels [which] that are present in [the diagonal] a direction diagonal to the first-mentioned two pixels in a column adjacent to that of the first-mentioned two pixels, and an image signal corresponding to [the] added signal charges of four pixels is outputted from said output unit.

9. (Amended) An image pickup device according to claim 7, wherein an image signal corresponding to signal charges is outputted from said output unit by combining a method of adding the signal charges in [said] the vertical direction and in [said] the diagonal direction and a method of further adding, to the signal charges added in [said] the vertical direction, signal charges in [said] the vertical direction.

11. (Canceled)

13. (Amended) An image pickup device according to claim 5, wherein [said] color filters corresponding to [said] the two predetermined [two] pixels are a combination of cyan and green and a combination of yellow and magenta, or a combination of yellow and green and a combination of cyan and magenta.

15. (Amended) An image pickup device according to claim 7, wherein [said] the color filters corresponding to [said] the two predetermined [two] pixels are a combination of cyan and green and a combination of yellow and magenta, or a combination of yellow and green and a combination of cyan and magenta.

17. (Amended) An image pickup device according to claim 9, wherein [said] the color filters corresponding to [said] the two predetermined [two] pixels are a combination of cyan and green and a combination of yellow and magenta, or a combination of yellow and green and a combination of cyan and magenta.

19. (Amended) An image pickup device according to claim 3, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the pixels to said plurality of vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

21. (Amended) An image pickup device according to claim 5, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the plurality of pixels to said vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

23. (Amended) An image pickup device according to claim 7, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the plurality of pixels to said vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

25. (Amended) An image pickup device according to

claim 9, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the plurality of pixels to said vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

27. (Canceled)

29. (Amended) An image pickup device according to claim 13, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the plurality of pixels to said vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

31. (Amended) An image pickup device according to claim 15, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the plurality of pixels to said vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

33. (Amended) An image pickup device according to claim 17, [wherein said image pickup element] further [comprises] comprising a plurality of electrodes each of which is connected commonly to every fourth pixel in the vertical direction, and which are adapted to control [the] read-out of [the] signal charges from [said] the plurality of pixels to said vertical [charge transfer] read-out units and to control [the] transfer of the signal charges from said vertical [charge transfer] read-out units to said horizontal [charge transfer] read-out unit.

35. (Amended) An image pickup device according to

Claim 3, wherein said control [means effects the control of] controls the plurality of pixels so as to generate alternately different kinds of color difference signals on the predetermined number of lines basis.

36. (Amended) An image pickup device according to Claim 3, further comprising:

a signal processing [circuit] unit, which subjects the signals [output] outputted from said output unit[, ] to an image processing[, ]<sub>i</sub> and

an image display unit, which [display] displays image information from said signal processing [circuit] unit.